

REMARKS

Applicant has carefully reviewed the Official Action dated April 27, 2005 for the above identified patent application.

The Examiner's indication at page 7, that Claim 17 is allowed and that Claims 15 - 16 are directed to allowable subject matter, is gratefully acknowledged by the Applicant.

At page 2 of the Official Action, the Examiner states that Claims 11 - 14 and 18 - 20 have been withdrawn from consideration as a result of a Restriction Requirement. Applicant confirms that the Election to prosecute Claims 1 - 10 and 15 - 17 was made without traverse.

At page 2 of the Official Action, the Examiner states that the background references identified in the Specification do not constitute a proper Information Disclosure Statement because the references were not listed on a Form PTO-1449. Enclosed is Form PTO-1449 listing each of the background patents identified in the background section of the specification, with the exception of U.S. Patent No. 5,768,953, which has been formally cited of record by the Examiner in the Official Action.

At page 2 of the Official Action, the Examiner has objected to the original Abstract of the Disclosure as exceeding the proper word limit. In response to this objection, enclosed

herewith is a Replacement Abstract overcoming the objection raised in the Official Action.

At page 3 of the Official Action, the Examiner has objected to the disclosure on the grounds that the Brief Description Of The Drawings does not refer to Figure 1 of the drawing as "Fig. 1A - 1D". In response to this objection, page 10 of the Specification has been amended accordingly.

The Specification has also been amended at page 3 to update the status of the identified patent applications which have now issued as patents.

Pages 11 and 12 of the Specification have also been amended to correct an inconsistency with the remaining portions of the Specification. At pages 11 and 12 of the original Specification, fluid flow passageway 4 has been identified as the passageway permitting full fluid flow, while fluid flow passageway 6 has been identified as the passageway having a restricted diameter. However, the discussion of the operation of the invention, at pages 14 - 15 of the original Specification, identifies fluid flow passageway 4 as being the passageway having the reduced diameter, while fluid flow passageway 6 is identified as the passageway providing full fluid flow. Applicant has therefore revised the references to passageways 4 and 6 at pages 12 and 13 of the original Specification to correct the inconsistency and conform to the identification of the corresponding passageways in

the discussion of the operation of the invention at pages 14 - 15 of the original Specification.

At page 3 of the Official Action, Claims 7 - 9 have been rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite. The basis for the formal grounds of rejection of these claims is set forth in the Official Action. With regard to Claims 7 and 8, Applicant has cancelled these claims, without prejudice. With regard to Claim 9, Applicant has adopted the suggestion of the Examiner to refer to the two fluid flow passageways as "first" and "second" fluid flow passageways. Therefore, the form of independent Claim 1 and the form of dependent Claims 2 - 5 and 9 - 10, have been amended to refer to "first" and "second" fluid flow passageways to avoid any confusion in the interpretation of these claims. Applicant respectfully submits that the Amendment to the form of these claims overcomes the formal grounds of rejection raised in the Official Action.

At page 4 of the Official Action, Claims 1 - 3 have been rejected under 35 U.S.C. Section 102(b) as being anticipated by the Arisumi patent (U.S. Pat. No. 4,932,282). [Although the first line of this rejection refers to Claims 1 - 3, the rejection itself addresses Claims 1 - 5. Therefore, Applicant will assume that Claims 1 - 5, and not just Claims 1 - 3, have been rejected as being anticipated by the Arisumi patent].

At page 6 of the Official Action, Claims 6 and 9 - 10 have been rejected by U.S.C. Section 103(a) as being obvious over the Arisumi patent.

Before discussing the prior art rejections of Claims 1 - 5, 6, and 9 - 10, Applicant notes that at page 7 of the Official Action, Claim 17 has been allowed, and Claims 15 - 16 have been indicated as containing allowable subject matter but have been objected to as depending from a rejected base claim. In response to the objection to Claims 15 - 16, dependent Claim 15 has been rewritten in independent form. This revision to the form of dependent Claim 15 overcomes the objection to both Claims 15 - 16. No additional fee for the added independent claim is enclosed, since the fee for this independent claim is offset by the withdrawal of independent Claim 18 as a result of the Restriction Requirement.

Turning now to the prior art rejection of independent Claim 1 and dependent Claims 2 - 5 as being anticipated by the Arisumi patent, Applicant initially notes that a rejection of a claim as being anticipated by a prior art reference requires the Patent & Trademark Office to establish a strict identity of invention between each rejected claim and the disclosure of a single prior art reference. Stated in other words, a rejection of a claim as being anticipated is only proper if a single prior art reference discloses all features of the claim, as arranged in the claim.

See, for example, Connell v. Sears, Roebuck & Co., 220 USPQ 193 (Fed. Cir. 1983).

Independent Claim 1 is directed to a method in which first and second fluid flow passageways are coupled to a manual timing valve. Initially, fluid pressure is applied to the manual timing valve simultaneously through both passageways. However, once a predetermined pressure has been applied to the manual timing valve, one of the fluid flow passageways is blocked so that fluid pressure is applied to a low and reverse modulator valve through the manual timing valve through only one of the two passageways.

Dependent Claims 3 - 5 are directed to methods in which one of the two passageways is reduced in diameter to provide reduced flow of fluid therethrough, while the other passageway provides full flow therethrough. It is the full flow passageway which is blocked when the predetermined pressure is applied to the manual timing valve such that fluid pressure is applied to the manual timing valve through only the reduced diameter passageway thereafter.

The methods defined by independent Claim 1 and dependent Claims 2 - 5 are distinctly different from the hydraulic circuitry disclosed in the Arisumi patent. The operation of the Arisumi patent will be discussed with reference to Figure 5c of the drawing and the corresponding portion of the specification, in particular, the portion of the specification starting at

Column 13, line 64 entitled "Manual Shift Timing Valve". As illustrated by Figure 5c, first and second inlet passages 360, 362 are coupled to the manual timing valve 306. Passageway 362 is restricted by an orifice 364, resulting in restricted fluid flow through passageway 362 into the manual timing valve 306 (See Column 14, lines 5 - 10 of the Arisumi specification.)

In operation, fluid pressure is initially applied to the manual timing valve 306 only through the restricted passage 362. It is only after a predetermined pressure has been applied to the manual timing valve through passage 362, that the valve is moved to permit fluid flow through the non-restricted passage 360 to apply a higher pressure to the manual timing valve (See Column 14, lines 10 - 20; Column 1, lines 12 - 33; and the Abstract of the Arisumi patent, which clearly disclose that pressure is applied to the manual timing valve only through the reduced diameter passage 362, until a predetermined pressure has been applied which opens the non-restricted passage 360).

Contrary to the express disclosure of the Arisumi patent, the method defined by Applicant's independent Claim 1 positively recites that fluid pressure is initially applied to the manual timing valve simultaneously from both the first and second passageways until a predetermined pressure is applied, at which time fluid flow from one of the passageways is blocked. Thus, the operation of the hydraulic circuitry of the Arisumi patent is exactly opposite to the method defined by Applicant's

independent Claim 1. In operation, the methods defined by Applicant's claims initially apply pressure to the manual timing valve simultaneously through two passageways until a predetermined pressure has been applied, and thereafter apply pressure to the manual timing valve through only a single passageway. On the contrary, Arisumi operates by initially applying fluid pressure to the manual timing valve only through a single passage until a predetermined pressure has been applied, and thereafter pressure is applied to the manual timing valve through both of the two passages. Thus, the operation of Arisumi is exactly opposite to the method defined by Applicant's independent Claim 1.

Dependent Claims 3 - 5 are directed to methods in which once the predetermined pressure has been applied to the manual timing valve, it is the non-restricted passageway which is blocked so that pressure is thereafter applied to the manual timing valve through only the restricted passageway. On the contrary, the hydraulic circuitry disclosed in the Arisumi patent operates so that fluid flow through the non-restricted passage is initially blocked until a predetermined pressure has been applied to the manual timing valve, and thereafter the non-restricted passage is opened to apply pressure to the manual timing valve. Thus, the operation of the Arisumi hydraulic circuitry in which the restricted passageway is initially closed and is opened only after a predetermined pressure has been applied, is exactly opposite to the operation of the methods defined by Applicant's

dependent Claims 3 - 5 in which the non-restricted passageway is initially opened until a predetermined pressure has been applied to the manual timing valve, and thereafter the non-restricted passageway is closed.

Since the operation of the hydraulic circuitry disclosed in the Arisumi patent is opposite to the methods defined by Applicant's independent Claim 1 and dependent Claims 2 - 5, it is clear that Arisumi does not anticipate these claims. Moreover, as a result of the distinct differences in operation of the hydraulic circuitry expressly disclosed by Arisumi and the specific methods defined by Applicant's independent Claim 1 and dependent Claims 2 - 5, the Arisumi disclosure does not suggest Applicant's claimed methods since the disclosure of Arisumi expressly teaches against the methods specifically defined by Applicant's claims.

For the reasons discussed herein, Applicant respectfully submits that independent Claim 1 and dependent Claims 2 - 5 are allowable over the disclosure of the Arisumi patent. Dependent Claims 6 and 9 - 10, which depend directly or indirectly from one of Claims 1 - 5, are allowable at least for the same reasons as Claims 1 - 5.

As noted above, independent Claim 17 has been allowed, and the form of Claims 15 - 16, which have been indicated as

containing allowable subject matter, have been revised to place these claims in proper form for allowance.

Applicant respectfully submits that all pending Claims 1 - 6, 9 - 10, and 15 - 17 are in condition for allowance, and favorable action is respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Mark P. Stone", written in black ink.

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REPLACEMENT PARAGRAPH
PAGE 12, LAST PARAGRAPH THROUGH PAGE 13, LAST LINE

When the manual timing valve 10 is in its most leftward position as viewed in FIGURES 1 and 2 of the drawing, the fluid flow passageways 12 and 14 are coupled in fluid communication to each other through the manual timing valve 10, and fluid is fed to the low and reverse modulator valve through the channel 14. As noted above, full main line pressure is applied to the manual timing valve 10 through fluid flow passageway ~~6~~ 4 , while restricted flow of main line pressure is applied to the manual timing valve 10 through fluid flow passageway ~~6~~ 4 . In the "factory installed" transmission, both the full main line pressure through passageway ~~4~~ 6 , and the restricted main line pressure through passageway ~~6~~ 4 , are simultaneously applied to the manual timing valve 10. As such, full main line pressure is applied to the low and reverse modulator valve 16 through the channel 14 coupling the manual timing valve 10 and the low and reverse modulator valve 16, without regard to the position of the manual timing valve 10. The diameter of a boost valve, designated by reference numeral 18 and positioned at the right end of the low and reverse modulator valve 16 as viewed in FIGURES 1 and 2, regulates the low and reverse clutch fluid pressure applied by the low and reverse modulator valve to the low and reverse clutches. In the "factory installed" transmission, the boost valve diameter is selected to regulate the low and reverse clutch pressure to 30 psi. Therefore, in the "factory installed" transmission, the low and reverse clutches

are fed with a fluid pressure of 30 psi at all times, without regard to the position of the manual timing valve 10, when the driver of the vehicle moves the manual valve to select a manual low gear position. The result is that the low and reverse clutches of the "factory installed" transmission are abruptly applied, and the maximum pressure applied is relatively low and adversely affects the holding ability of the low and reverse clutches. This, in turn, adversely affects the operation of the vehicle when, for example, the transmission is shifted into a manual low gear position to slow the vehicle when the vehicle is descending downhill, which may cause the low and reverse clutches to rapidly fail. Additionally, the abrupt application of the low and reverse clutches when the transmission is shifted into a manual low gear when the vehicle is travelling at relatively high road speeds can result in skidding, while the application of the low and reverse clutches too slowly may result in a free-wheeling or neutral condition of the vehicle.